

DDI - A Metadata Standard for the Community

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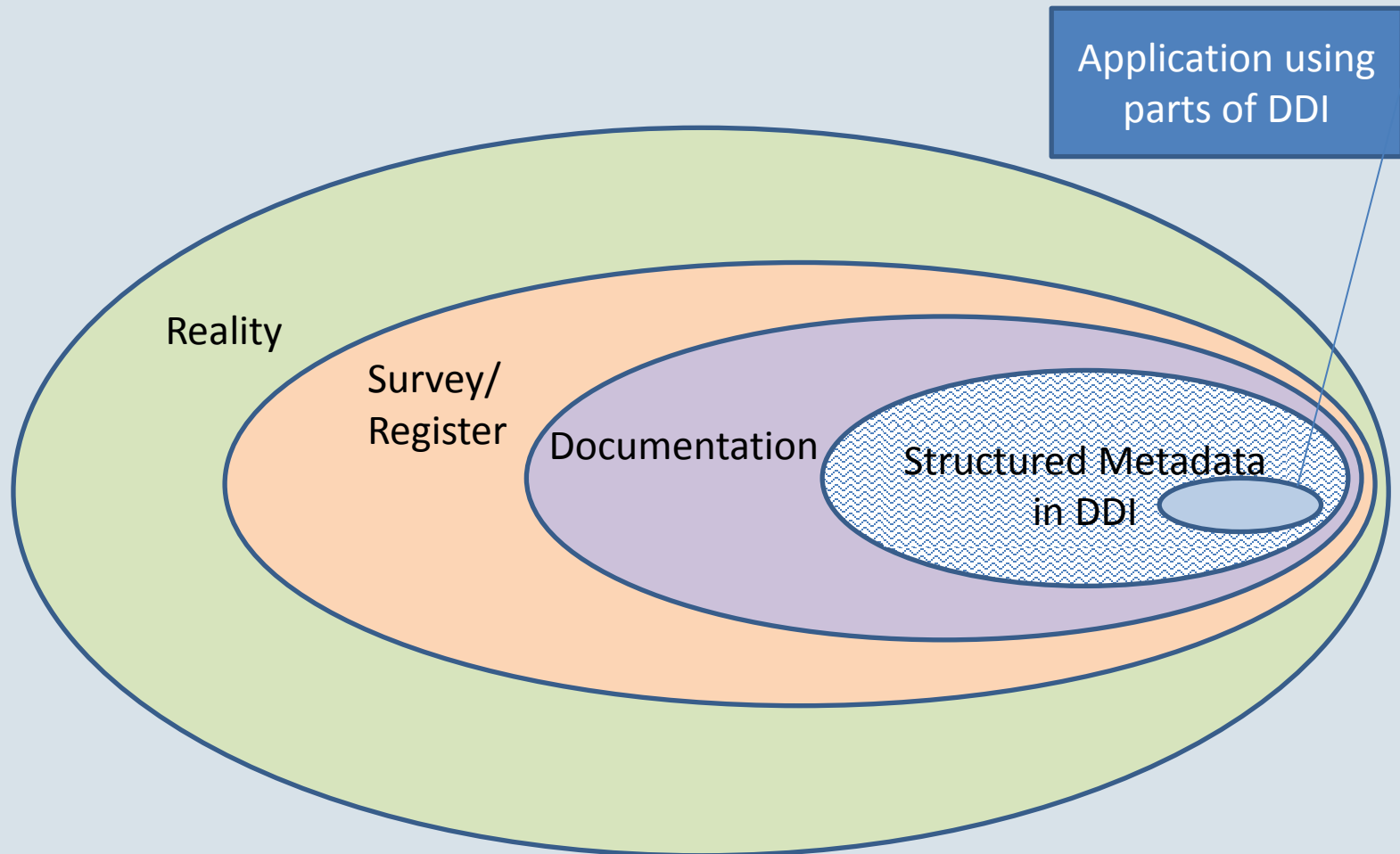
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Today's Presentation -- "State of the DDI"

- What is DDI? Benefits and Principles
- Barriers and Challenges
- DDI of the Future
- How You Can Help

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What is DDI?





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A Project of and for the Community

- Developed by a self-sustaining membership Alliance recently reconfigured with new Bylaws
- Two major development lines
 - DDI Codebook
 - DDI Lifecycle
- Metadata for both human and machine consumption
- Additional specifications:
 - Controlled vocabularies
 - RDF vocabularies for use with Linked Data



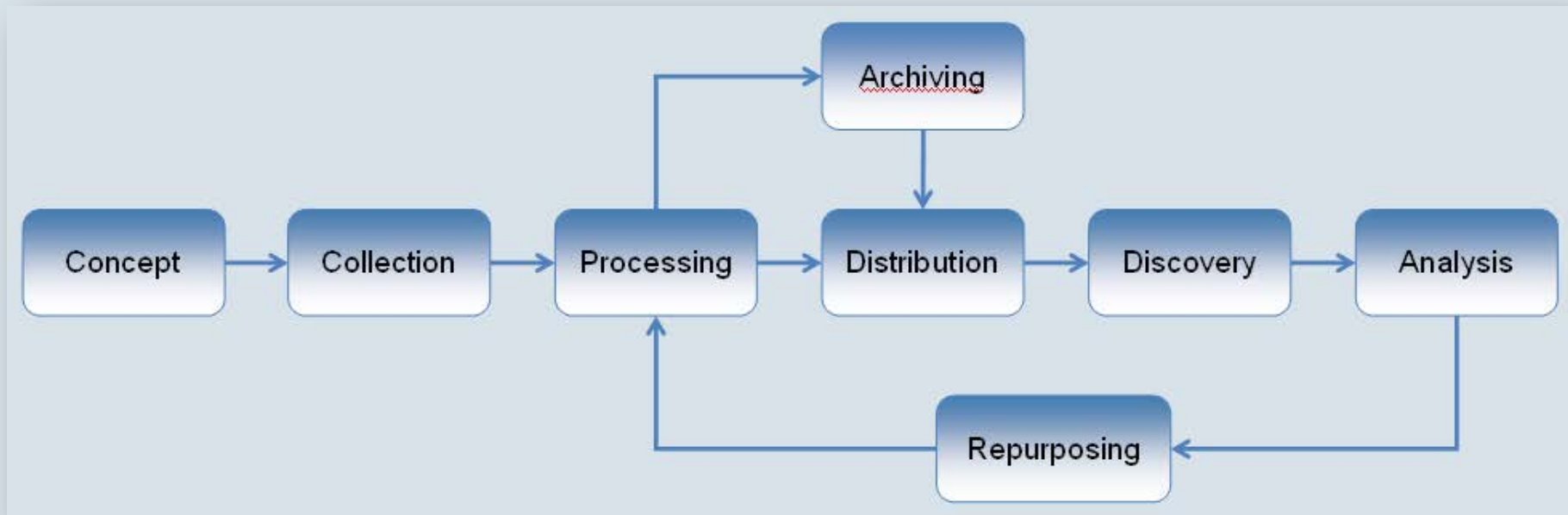
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Primary Benefits

- Rich content (currently over 800 items)
- Metadata reuse across the life cycle
- Machine-actionability
- Data management and curation
- Support for longitudinal data and comparison
- Support for preservation and platform-independent software
- Support for a global network

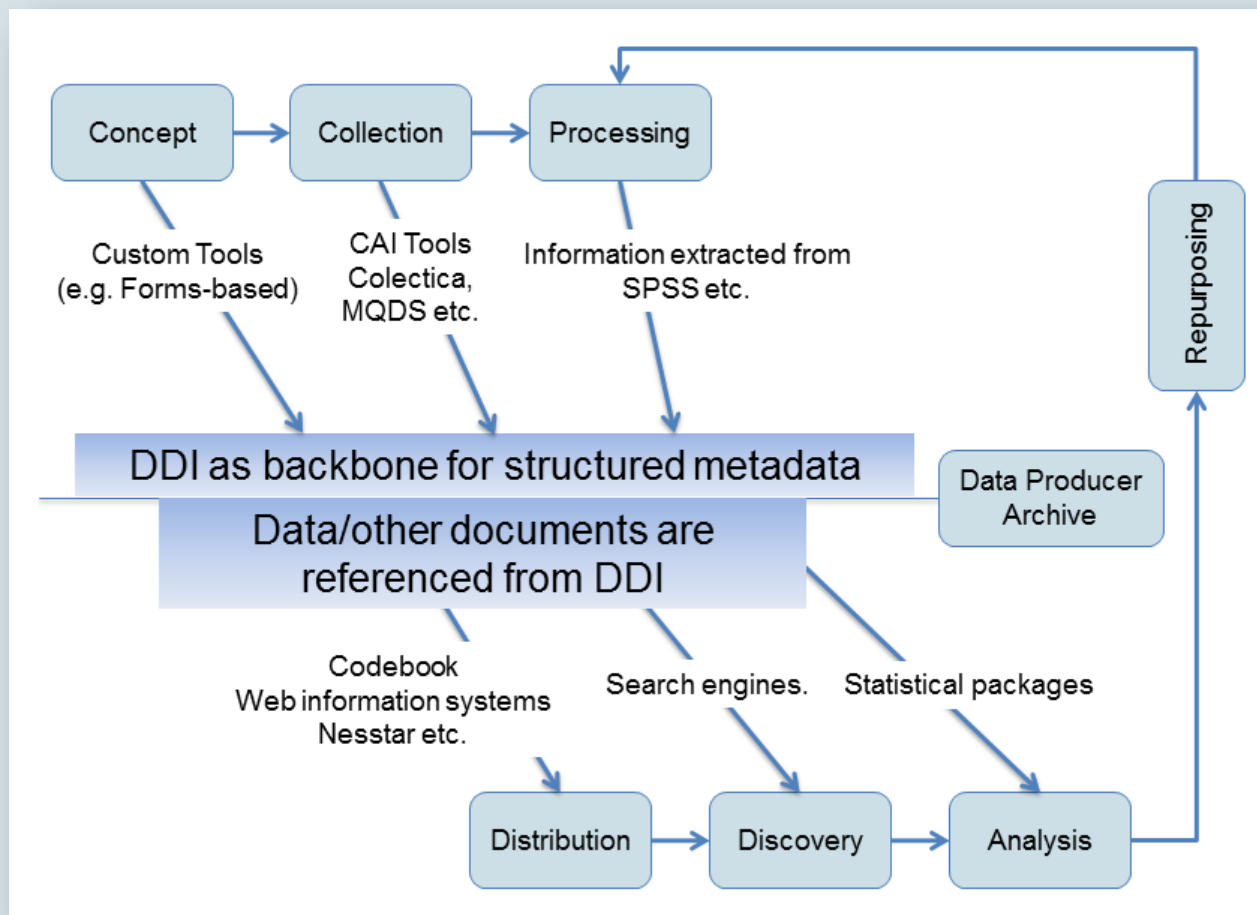
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Metadata Reuse



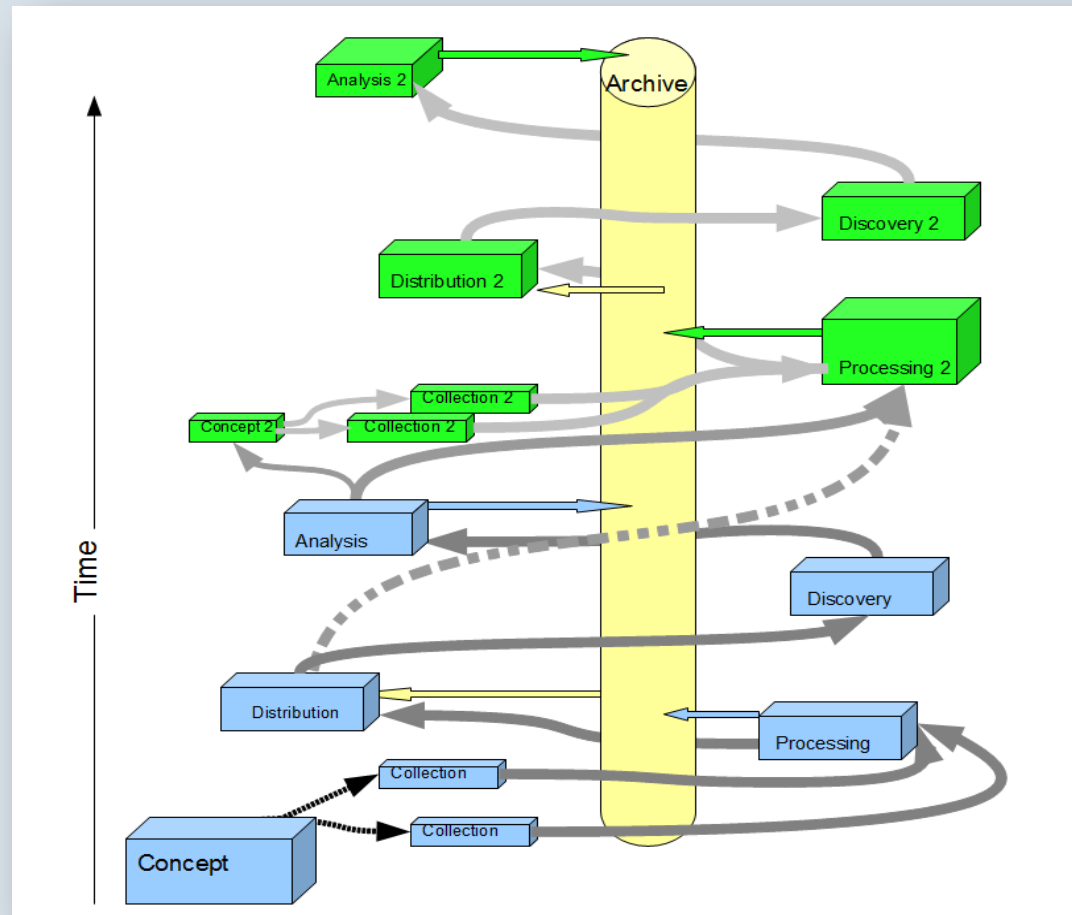
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Machine-Actionability



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Longitudinal Data and Comparison





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Paradigm Shift

- Using structured metadata in standardized form -- a paradigm shift for social science research infrastructure
- We might compare this to the change in the 1990s when people began to understand the value of linked documents



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Distributed Approach

- Shift from centralized maintenance and control of metadata by the researcher or archive to a distributed approach
- More efficient and easier to capture information about an event at the time of its occurrence rather than after the fact



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Barriers and Challenges

- Complexity
- Level of researcher buy-in
- Need for tools
- Changes in workflow
- Access to metadata



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Measuring Success

- Adoption around the world
 - Projects range from the General Social Survey in the U.S., to the Research Data Centres in Canada, to Statistics New Zealand
 - Through IHSN, DDI is now being used in over 70 countries
 - DDI is a centerpiece of proposed CESSDA-ERIC (European Research Infrastructure Consortium)

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Global DDI





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Moving Forward: RDF Vocabularies for Semantic Web

- DDI-RDF Discovery Vocabulary

For publishing metadata about datasets into the Web of Linked Data

Based on DDI Codebook and DDI Lifecycle

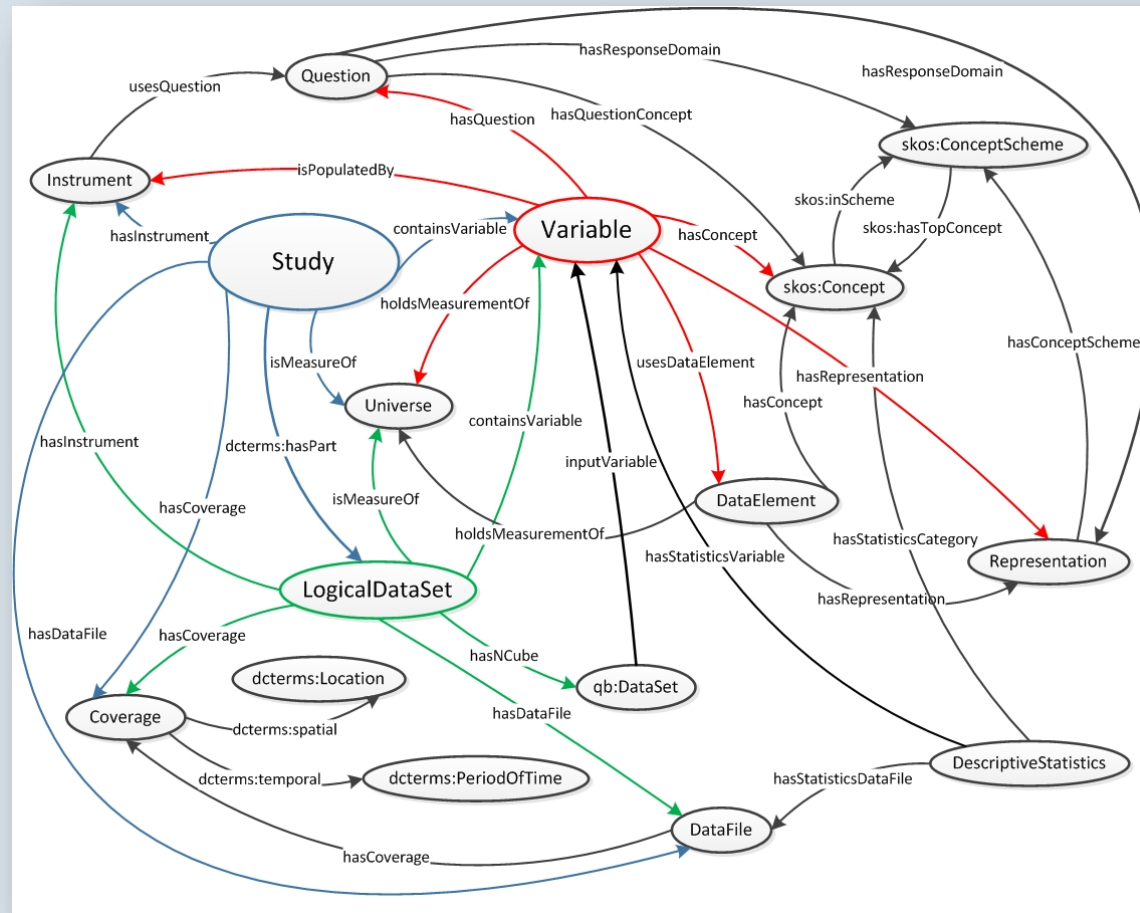
- XKOS

RDF vocabulary for describing statistical classifications, which is an extension of the popular SKOS vocabulary

Publication expected in second half of 2013

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RDF Discovery Vocabulary





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DDI of the Future

- Robust and persistent data model (for the metadata), with extension possibilities, variety of technical expressions
- Complete data life cycle coverage
- Broadened focus for new research domains
- Simpler specification that is easier to understand and use including better documentation



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Why Now?

- Experiences in developing and using the initial DDI Lifecycle structure
- Lack of a data model proved limiting in:
 - Further improvement of the development line 3.*
 - Development of sustainable software based on different versions of DDI
- Pressure for changes from several directions at once
 - New content from substantive working groups
 - Being approached by new communities



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Specific Changes Envisioned I

- Abstraction of data capture/collection/source to handle different types of data
- New content on sampling, survey implementation, weighting, and paradata
- New content developed by the Qualitative Working Group
- Framework for data and metadata quality
- Framework for access to data and metadata



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Specific Changes Envisioned II

- Process (work flow) description across the data life cycle, including support for automation and replication
- Integration with GSBPM/GSIM, SDMX, CDISC, Triple-S
- Disclosure review and remediation
- Data management planning
- Development of standard queries and/or interface specifications (such as REST), needed to enable interoperable services



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High-level Design Goals I

Coming out of Dagstuhl 2012 workshop:

1. Interoperability and Standards
2. Simplicity
3. User Driven
4. Terminology
5. Iterative
6. Documentation
7. Lifecycle Orientation



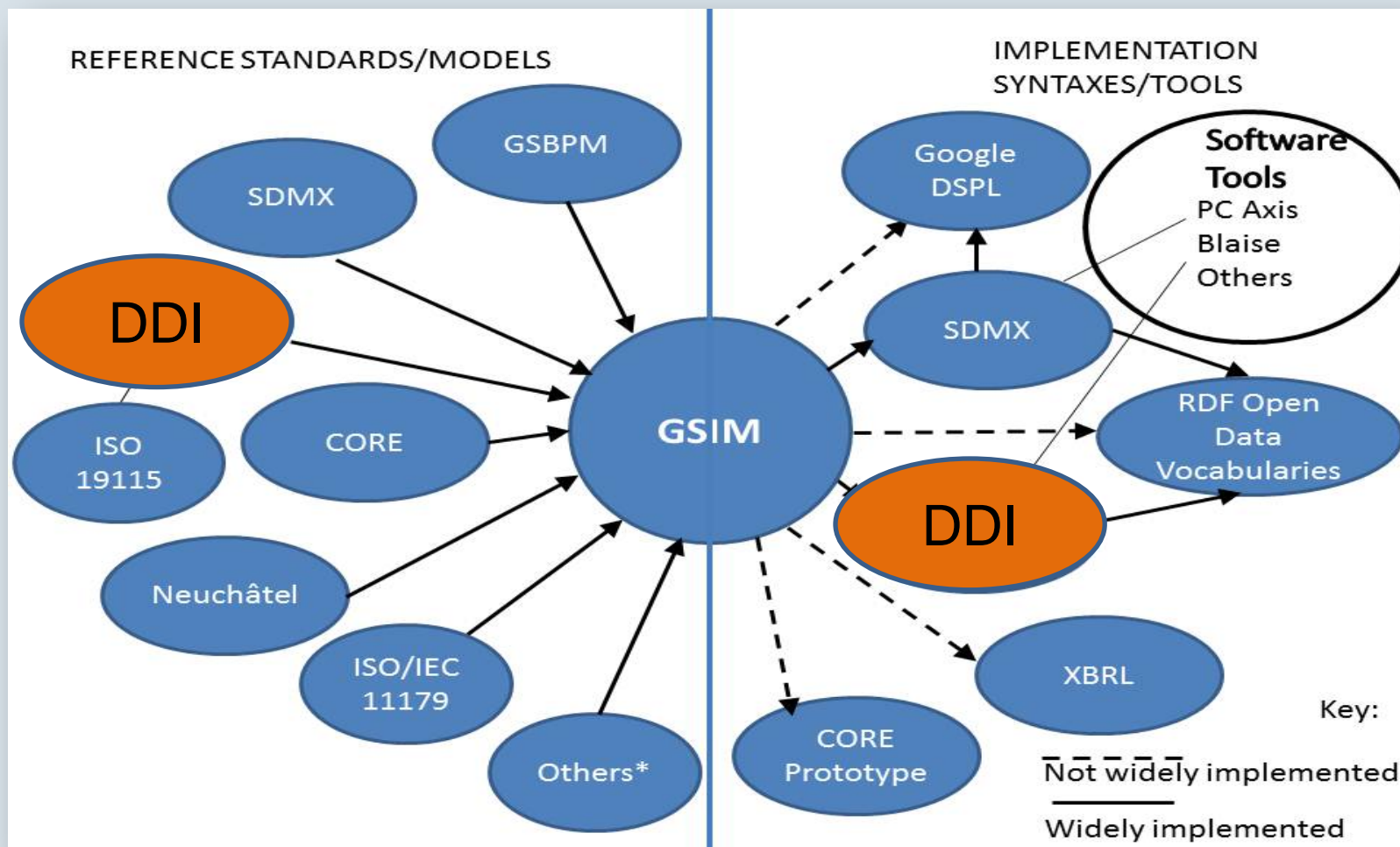
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High-level Design Goals II

- 8. Reuse and Exchange
- 9. Modularity
- 10. Stability
- 11. Extensibility
- 12. Tool Independence
- 13. Innovation
- 14. Actionable Metadata

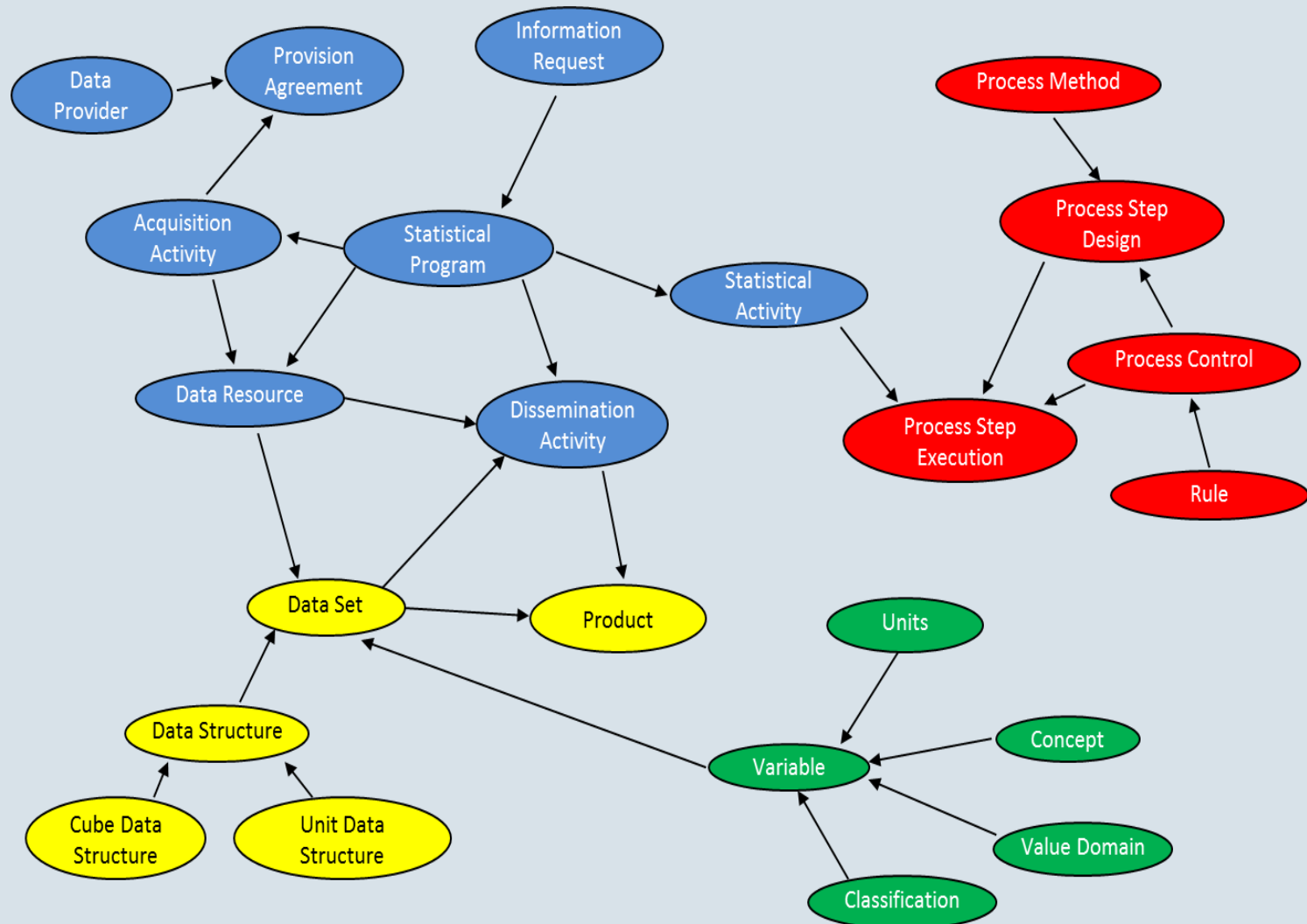
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DDI in Relation to GSIM and Other Standards



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Alignment with GSIM





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DDI Development Lines

- DDI Codebook
 - DDI 2.1 (DTD)
 - DDI 2.5 (XML Schema)
- DDI Lifecycle
 - DDI 3.1, 3.2 (XML Schema)
 - **DDI X (model-based)**
 - Bindings as
 - XML Schema
 - RDF
 - Data as a Service, Service Oriented Architecture (SOA), Web services, REST
 - Recommendations for schemas for database management systems



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Time Line Moving Forward

- New work initiated at Dagstuhl workshops on “Moving Forward” in Autumn 2012
- Planned to continue in October 2013
- Ongoing virtual work involving the community in progress – roadmap developed yesterday
- User stories and core being defined
- Mapping among DDI, SDMX, GSIM under way
- First draft of model expected by end of 2014



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You Can Contribute!

- Please join us on a working group
- Participate in technical work, including modeling
- Join the DDI Alliance!